In re Appln. of Gridley et al.
Application No. 09/491,661

REMARKS

The undersigned would like to thank the Examiner for the telephonic interview conducted on December 18, 2002. In the interview, the references applied in the Office Action dated June 19, 2002, and proposed claim amendments were discussed. In order for the Office to fully consider the amendments and remarks made herein, this Response is being submitted concurrently with a Request for Continued Examination under 37 CFR § 1.114.

Applicants have carefully reviewed and considered the Office Action dated June 19, 2002, and the references cited therein. In response, applicants have amended claims 14, 22, 23, 26 and 30-33. No new matter has been added by way of these amendments. Applicants believe that the application is now in condition for allowance. Accordingly, favorable reconsideration in light of the following remarks is respectfully requested.

Claims 14-20 and 22-33 are pending with claims 14 and 22 being independent claims.

Claims 23, 25, and 26 stand rejected under 35 U.S.C. § 112, ¶ 2 as being indefinite. The Office Action contends that in these claims the phrase "a plurality of tread rollers for mounting a roll of tire tread thereto" is unclear. Applicants respectfully traverse the rejection. In response, applicants have amended claim 23 to redefine the invention without narrowing its scope. It is respectfully submitted that support for the cited claim phrase is found at page 8, lines 2-3 of the written description and as shown in FIG. 3. In addition, the amendment points out the tread rollers support the roll of tire tread.

Claims 14-20 and 22-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Taylor, either alone or in view of one of several secondary references. In response to the § 103 rejection, claim 14 has been amended.

With respect to amended claim 14, applicants respectfully submit that the § 103 rejection in view of Taylor is traversed. Taylor discloses a method for retreading tires wherein a precured tread component is bonded to a tire casing primarily by using the residual heat in the precured tread component. The residual heat of the tire tread in the bonding zone is used to cure the cushion gum and to provide a bond between the tread and the tire. In one disclosed method, the tread is conveyed directly from a molding apparatus to the tire casing. In another disclosed method, the tread strip is stored and subsequently reheated by a heating device before being applied to the tire casing.

The Taylor system includes a moving and conveying means 6 for conveying the tread to the tire carcass. A lineal measurement device 15 is provided for recording "the precise circumferential dimensions of the carcass and electronically feed[ing] the data to a cutting device 16 which severs the tread strip to the precise length required to conform to the circumference of the tire." Column 3, lines 40-44. The Taylor method feeds circumferential data to the cutter. In amended claim 14, on the other hand, the circumference of the tire casing is communicated to the tire tread dispenser which in turn dispenses a length of tire tread based on the circumference of the tire casing. There is no teaching or suggestion in Taylor to dispense tire tread material based on the measured circumference of the tire casing.

Furthermore, as recognized by the Office Action, Taylor does not teach or suggest a step for adjusting the tire tread with respect to the cutter via a tire drive. In fact, Taylor teaches away from adjusting the tire tread so that the tire tread design on each end matches at the point where the tread may be cut by disclosing that the tread length is cut at "the precise length" required to conform to the circumference of the tire. If the claimed adjusting step were appended to the Taylor system as propounded by the Office Action, the operability of such a resulting system for retreading tires is in question insofar as it is not at all clear how the modified Taylor system would compensate for any difference between the length of tread, adjusted for tread matching, and the circumference of the tire casing.

Claims 15-20 depend from claim 14 and thus contain the same patentable features as claim 14.

With respect to claim 22, applicants respectfully submit that the subject § 103 rejection is traversed. In response, applicants have amended claim 22. As an initial matter, according to the Office Action, "additional portions of the claims define the method in which various components of the apparatus communicate with each other in order to obtain a desired length of tread." Applicants understand the Office Action to assert that such portions do not add patentable weight to the instant apparatus claim. Applicants respectfully disagree with this position and submit that newly amended claim 22 is patentably distinct from the Taylor system. It is completely appropriate to define the tire tread cutting apparatus at least in part by what it does. The "additional portions" should be evaluated and considered, just like any other portion of the claim, for what it fairly conveys to a person of ordinary skill in the art in the context in which it is used. *See* MPEP 2173.05(g).

Applicants respectfully submit that there are substantial structural differences between the claimed tire tread cutting apparatus and the Taylor apparatus. Amended claim 22 points out that the tread dispenser dispenses a length of tire tread based on the measured circumference. The tread dispenser recitation in newly amended claim 22 serves to precisely define present structural attributes of interrelated component parts of the claimed tire tread cutting apparatus, namely the tread dispenser and the measuring device. *See* MPEP 2173.05(g); *In re Venezia*, 530 F2d 956 (CCPA 1976); *see also*, *Pac Tech Inc. v. Amerace Corp.*, 14 U.S.P.Q.2d 1871, 1876 (Fed. Cir. 1990) (upholding district court's ruling that "adapted to" language could not be disregarded in assessing validity of the claim). Furthermore, the claimed tread dispenser includes a tread drive adapted to allow the tire tread to be adjusted relative to the tread cutter to permit the length of tread to be determined for tread pattern matching the ends. The Taylor apparatus does not teach or suggest such a tread dispenser.

In addition, the Office Action does not support its conclusion that the Taylor apparatus is capable of functioning as the claimed invention does. In fact, the Taylor reference provides very little information with respect to the movement of tire tread to the tire casing. The Office Action also fails to point to anything in the prior art that would motivate one of ordinary skill in the art to modify the Taylor apparatus to achieve the claimed invention. Further, the Office Action fails to provide any rationale for concluding that there is a reasonable expectation that the Taylor apparatus can be successfully modified to yield the claimed invention.

Claims 23-33 depend from claim 22 and thus contain the same patentable features as claim 22.

With respect to claims 26 and 30-33, these claims have been amended to redefine the invention without narrowing their scope. The amendments make clear that the respective claims include further structural recitations which should be evaluated and considered for what they fairly convey to a person of ordinary skill in the art in the context in which it is used. *See* MPEP 2173.05(g); *In re Venezia*, 530 F2d 956 (CCPA 1976); *Pac Tech Inc.*, 14 U.S.P.Q.2d at 1876 (Fed. Cir. 1990). With respect to claim 33 in particular, the amendment makes clear that the claim is directed toward the physical relationship between the tread cutter and the second clamp.

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Conclusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

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Date: December 19, 2002

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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this RESPONSE TO OFFICE ACTION (along with any documents referred to as being attached or enclosed) is being transmitted by facsimile to the United States Patent and Trademark Office, Attention: Examiner J. Fischer, Art Unit: 1733, After Final Facsimile Number: 703-872-9311, on the date indicated.

Date: 12-19-02 Dena Shell

RESPONSE UNDER 37 CFR 1.116
EXPEDITED PROCEDURE
EXAMINING GROUP 1733

PATENT
Attorney Docket No. 305334

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Gridley et al.

Application No. 09/491,661

Filed: January 27, 2000

For: METHOD AND APPARATUS FOR PREPARING TIRE TREAD FOR A RETREAD TIRE

Art Unit: 1733

Examiner: J. Fischer

AMENDMENTS TO SPECIFICATION, CLAIMS, AND ABSTRACT MADE IN RESPONSE TO OFFICE ACTION DATED JUNE 19, 2002

Amendments to existing claims:

14. (Twice Amended) A method of cutting a length of tire tread for a retread tire having a tire casing, the method comprising:

measuring a circumference of a tire casing wherein a cushion gum may be present;

automatically communicating, electronically, the circumference of the tire casing to a tire tread dispenser;

automatically dispensing a length of tire tread based on the circumference of the tire casing, the length of tread having a first end and a tread design;

adjusting said tire tread with a tire drive relative to a tread cutter so that the tire tread design on each end matches at the point where the tread may be cut; and

cutting the tire tread with the tread cutter to define a second end of the tire tread so that said tread design will appear substantially continuous across a seam generated by each end of said tread once applied to the tire casing.

22. (Amended) A tire tread cutting apparatus for cutting a length of tire tread, the length of tire tread having a first end and a second end and a periodically repeating tread pattern, to be affixed to a tire casing having a cushion gum, comprising:

a measuring device ~~configured~~adapted to measure at least one of the circumference of the tire casing and the circumference of the tire casing plus the cushion gum;~~and~~

a tread dispenser ~~configured~~adapted to automatically dispense a length of tire tread based on the circumference of at least one of the tire casing and the tire casing plus the cushion gum as measured by the measuring device;; and

~~the tread dispenser including~~ a tread cutter for cutting the tread to define the length of tread;;

~~and~~wherein the tread dispenser includes a tread drive ~~configured~~ adapted to allow the tire tread to be adjusted relative to the tread cutter to permit the length of tread to be determined such that the ends of the tire tread come together after the tread has been applied to the tire casing and the tread pattern at the second end substantially matches the tread design at the first end.

23. (Amended) The apparatus of claim 22 wherein the tread dispenser includes a plurality of tread rollers for ~~mounting~~supporting a roll of tire tread ~~thereto~~, the length of tire tread being dispensed from the roll.

26. (Amended) The apparatus of claim 23 wherein the tread dispenser includes a plurality of drive rollers, the drive rollers disposed between the roll of tire tread and the tread cutter, the drive rollers ~~configured~~ adapted to deploy the tire tread from the roll to the tread cutter.

30. (Amended) The apparatus of claim 29 wherein the first clamp includes a first clamp encoder, and the second clamp includes a second clamp encoder, the first and second clamp encoders ~~configured~~ adapted to track the location of the first and second clamps, respectively, along the track.

31. (Amended) The apparatus of claim 29 wherein the first clamp is ~~configured~~ adapted to propel the first end of the length of tire tread along the track.

32. (Amended) The apparatus of claim 29 further comprising:

a retractable stop ~~configured~~ adapted to provide a known location of the first end relative to the first clamp.

33. (Amended) The apparatus of claim 29 wherein the tread cutter is ~~located~~ disposed a known distance from the second clamp.